

WHAT IS CLAIMED IS:

1. A printer comprising:

a receiving buffer in which received print data and control data are stored as received data in the order of receipt;

an executing section configured to read the received data from the receiving buffer in the order of storage, and develop the received data into an image if the received data is the print data and execute a control command if the received data is the control command of the control data; and

a pre-processing section configured to pre-read the received data stored in the receiving buffer before the executing section reads them and, when a specific control command of the control data from the pre-read received data is found, the pre-processing section executing a procedure corresponding to the detected control command prior to the executing section.

2. The printer according to claim 1 wherein the specific control command is a cancel command for canceling the print based on the print data received prior to the specific control command, and

when the pre-processing section finds the cancel command, the pre-processing section executes the cancel command prior to the executing section.

3. The printer according to claim 2 further comprising a read-out position changing section which functions, when the pre-processing section has executed the cancel command, such that the position in the receiving buffer for the executing section to read the received data is jumped to the position next to the cancel command.

4. The printer according to claim 1 further comprising: a rewrite section which functions, when the pre-processing section has executed the specific control command of the

control data, to rewrite a no-operation command into the portion of the executed control command in the receiving buffer.

5. The printer according to claim 1 wherein the printer has only one logic channel for receiving the print data and the control data from a computer.

6. The printer according to claim 2 wherein the executing section is realized by assigning to a central processing unit in a predetermined order of priorities and executing:

a read-out task configured to read out the receiving data from the receiving buffer according to a read-out pointer, output them, and count up the read-out pointer every time; and

a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data,

the pre-processing section being realized by a pre-read execute processing incorporated in the main task, which reads out the received data from the receiving buffer according to a pre-read pointer, counts up the pre-read pointer every time, and functions, when the cancel command is found from the received data, to cancel the print based on the print data received prior to the cancel command.

7. The printer according to claim 6 wherein, if the cancel command has been detected by the pre-processing section, the read-out task moves the read-out pointer forward to the position next to the pre-read pointer.

8. The printer according to claim 2 wherein the executing section is realized by assigning to a central processing unit in a predetermined order of priorities and executing:

a read-out task configured to read out the receiving

data from the receiving buffer according to a read-out pointer, output them, and count up the read-out pointer every time; and

a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data,

the pre-processing section being realized by assigning a pre-read task to the central processing unit in a predetermined order of priorities and executing the pre-read task, the pre-read task reading out the received data from the receiving buffer according to a pre-read pointer, counting up the pre-read pointer every time, and functioning, when the cancel command is found from the received data, to transmit to the main task a message for canceling the print based on the print data received prior to the cancel command.

9. The printer according to claim 8 wherein the priority of assignment of the processing unit to the pre-read task is lower than the priorities to the read-out task and the main task.

10. The printer according to claim 8 wherein, if the cancel command has been detected by the pre-processing section, the read-out task moves the read-out pointer forward to the position next to the pre-read pointer.

11. The printer according to claim 2 wherein the executing section is realized by assigning to a central processing unit in a predetermined order of priorities and executing:

a read-out task configured to read out the receiving data from the receiving buffer according to a read-out pointer, output them, and count up the read-out pointer every time; and

a main task configured to acquire the received data from the read-out task, and the main task developing the print

data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data,

the pre-processing section being realized by assigning a pre-read task to the central processing unit in a predetermined order of priorities and executing the pre-read task, the pre-read task reading out the received data from the receiving buffer according to a pre-read pointer, counting up the pre-read pointer every time, and functioning, when the cancel command is found from the received data, to transmit to the read-out task a message for canceling the print based on the print data received prior to the cancel command.

12. The printer according to claim 11 wherein the priority of assignment of the processing unit to the pre-read task is lower than the priorities to the read-out task and the main task.

13. The printer according to claim 11 wherein, if the cancel command has been detected by the pre-processing section, the read-out task moves the read-out pointer forward to the position next to the pre-read pointer.

14. The printer according to claim 1 wherein the specific control command is a paper size designation command which designates a particular paper size for printing the print data received subsequently to the paper size designation command,

the pre-processing section functioning upon detection of the paper size designation command to determine beforehand whether the print on a sheet of paper of the size designated by the paper size designation command is possible, and functioning upon the print being impossible to inform a user of that fact.

15. The printer according to claim 14 wherein the pre-

processing section functions upon detection of the paper size designation command to determine beforehand whether the printer has a paper tray of the size designated by the paper size designation command and, if the printer has no paper tray of the size designated by the paper size designation command, to inform a user of that fact, and to determine beforehand whether the paper tray of the size designated by the paper size designation command contains a sheet of paper and, if the paper tray of the size designated by the paper size designation command has no paper, to inform the user of that fact.

16. The printer according to claim 14 wherein the executing section is realized by assigning to a central processing unit in a predetermined order of priorities and executing:

a read-out task configured to read out the receiving data from the receiving buffer according to a read-out pointer, output them, and count up the read-out pointer every time; and

a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data,

the pre-processing section being realized by pre-read execute processing incorporated in the main task, which reads out the received data from the receiving buffer according to a pre-read pointer, counts up the pre-read pointer every time, and functions, when the paper size designation command is found from the received data, to determine beforehand whether the print on a sheet of paper of the size designated by the paper size designation command is possible, and if not, to inform a user of that fact.

17. The printer according to claim 14 wherein the executing section is realized by assigning to a central processing unit in a predetermined order of priorities and executing:

a read-out task for reading out the receiving data from the receiving buffer according to a read-out pointer, outputting them, and counting up the read-out pointer every time; and

a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data,

the pre-processing section being realized by assigning a pre-read task to the central processing unit in a predetermined order of priorities and executing the pre-read task, the pre-read task reading out the received data from the receiving buffer according to a pre-read pointer, counting up the pre-read pointer every time, and functioning, when the paper size designation command is found from the received data, to determine beforehand whether the print on a sheet of paper of the size designated by the paper size designation command is possible, and if not, to inform a user of that fact.

18. A printer control method comprising the steps of:
 - storing received print data and received control data as received data in a receiving buffer in the order of receipt;
 - reading the received data out of the receiving buffer in the order of storage;
 - developing the print data into an image if the received data is the print data;
 - executing a control command if the received data is the control command of the control data;
 - pre-reading the received data stored in the receiving buffer prior to the reading them;
 - pre-executing procedure corresponding to a specific control command prior to the executing it if the specific control command of the control data is detected by the pre-reading.

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